



IN RE APPLICATION OF) GROUP ART UNIT: 3661
Gary L. Owen et al.) EXAMINER: R. Mancho
SERIAL NO: 09/391,782) DOCKET REF.: 99CR108/KE
FILED: September 8, 1999) SUBMITTED: August 3, 2001
FOR: METHOD AND APPARATUS FOR INTERACTIVELY DISPLAYING A
ROUTE WINDOW FOR A FLIGHT MANAGEMENT SYSTEM

AFFIDAVIT OF GARY L. OWEN

My name is Gary L. Owen. I am a designer of avionics FMS display systems.

I have no ownership interests in the above-referenced patent application.
I previously conveyed all of my ownership interests in the above-referenced patent.

I am employed by Rockwell Collins of Cedar Rapids, Iowa.

My educational background is a Bachelor's of Science Degree in Electrical Engineering, with honors from North Dakota State University.

I have been employed as an avionics engineer for more than 20 years, and I am very familiar with the state of the art of avionics flight management systems (FMS) displays and consider myself to be a person having ordinary skill in the art of designing avionics FMS display systems.

S. Affordt
8/14/01
Holmes

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I was very familiar with the state of the art of avionics FMS display systems as of 9/08/99.

I was very familiar with the published literature in the area of avionics FMS display systems as of 9/08/99.

I personally know many persons having ordinary skill in the art of avionics FMS display system design.

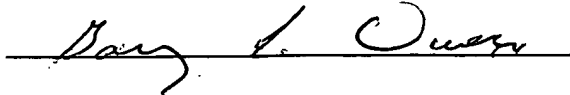
A "route window" connotes a textual only window of route related information where the information therein is much more extensive than a mere waypoint list.

The persons that I know who possess ordinary skill in the art, as of 9/08/99, would have understood the term "route window" to convey a textual only window showing textual information relating to a route, such as the configurable route window 204 in Figures 2-6 of the above-referenced patent application or as the route window described in Exhibit A, attached hereto.

Exhibit A is a representative example of a use of the term "route window." Exhibit A is a printed page, found at www.navtechgps.com/supply/gpslog.asp.

The Examiner stated in the office action dated 5/03/01 that a configurable route window was shown in Figures 9, 15, 16 and 22 of U.S. Patent 6,038,498 issued to Briffe et al. Figures 9, 15, 16 and 22 of this patent do not show a route window. They show graphical maps displaying route information in a graphical

format. Such graphical maps are not "route windows" as the term is used in the art of avionics FMS display systems. *MD*


GARY L. OWEN

STATE OF IOWA)
) ss
COUNTY OF LINN)

On this 3rd day of August, 2001, before me, a Notary Public in and for the State and County aforesaid, personally appeared Gary L. Owen, to me known and known to me to be the person of that name who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed,


Sheila K. Mathews
Notary Public in and for said County and State

My Commission expires: 2/15/02

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GPS Equipment:

Antenna Products
Combination GPS/Antenna
GPS Signal Repeaters
Satellite Communications
GIS Data Collection
DGPS Data Links
Differential GPS
Handheld GPS
OEM GPS Boards and Kits
GPS Sensors
Precision GPS
Remote Tracking

Misc. Parts

Software:

Data Logging & Analysis
Development/Engineering
Electronic Mapping
GIS Data Collection
DGPS Post Processing

Shipping/Returns Policy

Glossary

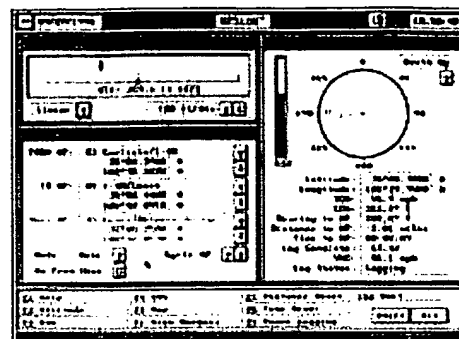
Links to Other Sites

Comments

GPSLog

GPS Data Acquisition Software by Sandia Research Associates, Inc.

GPSLog™ is the easy-to-use software solution for a variety of GPS data acquisition needs. GPSLog works with most GPS receivers that have data ports. If you regularly evaluate many different receivers, GPSLog just may be the program that will work with them all (See compatibility below).



The GPSLog main window display is cycled by each GPS receiver reading. Numeric display windows show the current GPS position, course and velocity, and GPS operating and positioning modes. Time and distance counters show the total elapsed time and distance traveled.

The statistics window shows maximum and minimum altitude, and maximum and average speed over ground since the start of the session, and the data logging window shows logging rate and status. The lower portion of the main screen is the command window which allows the user to access other valuable features of GPSLog.

GPSLog can log the GPS data to disk. The type of data to be logged as well as the data format can be specified by the user in the logging setup. The log rate is also user definable. A valuable feature of GPSLog is the custom 16-character strings that can be assigned to the 26 alphabet keys on the keyboard. When any of these are activated, the character string is written to the log file along with the GPS data. The moving map can display these markers.

GPSLog provides several pop-up, real-time X-Y waterfall graphs. These graphs, which include SOG, COG, altitude, distance, and DOP show a time history of incoming data in a scrolling waterfall type bar graph. GPSLog also provides a pop-up real-time map which plots your position history as a series of dots. The map buffers up to 4096 latitude and longitude data points. The plot scale is adjustable over a wide range.

Map options allow you to change the size of the crumbs, project a future position, display markers, zoom in, zoom out, calculate distance and bearing, or apply a grid.

Other GPSLog pop-up displays include a time data window, SV data window, marker list, incoming NMEA sentences, and configuration window.

Also available is the optional GPSLog-NAV™ navigation module. GPSLog-NAV is used in conjunction with GPSLog software to incorporate information from a predefined route file and output navigation information to the screen and steering device.

GPSLog-NAV calculates your cross-track-error, bearing-to-waypoint, distance-to-waypoint, time-to-waypoint, percentage of leg complete, and velocity made good.

The navigation screen is divided into three data windows. The cross-track-error window displays a graphic steering indicator, and cross-track-error in numeric format.

The route window displays the description, latitude, and longitude of the

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"from waypoint," "to waypoint", and "queued waypoint". This window also allows you to switch from one leg of the route to the next either manually or automatically. It provides an optional alarm to signal when you've reached a waypoint and it allows you to create a "go from here" waypoint at your current position.

The direction window graphically displays your bearing-to-waypoint and course over ground. This window also displays latitude, longitude, course-over-ground, speed-over-ground, bearing-to waypoint, distance-to-waypoint, time-to-waypoint, percentage of leg complete, and logging status.

GPSLog
Part #2075, \$285.
[Order it Now!](#)

GPSLog with GPSLog-Nav Module
Part #2074, \$469.
[Order it Now!](#)

The GPSLog-NAV Module*
Part #2076, \$199.
[Order it Now!](#)

*Purchase of the GPSLog-NAV Module alone requires prior purchase of GPSLog. Please provide your GPSLog serial number when ordering.

System Requirements: IBM compatible 386 or higher

DOS 3.2 or higher

640K memory or higher

VGA or higher graphics

DOS printer

Mouse or pointing device

Receivers Supported NMEA-0183 GPS receivers

Trimble TSIP GPS receivers